

To: Ricker, Michelle[MRicker@scsengineers.com]
From: Robin, George
Sent: Wed 7/24/2013 10:16:04 PM
Subject: RE: Evaluating Producing Hydrocarbons for Aquifer Exemptions

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Hi Michelle,

Sorry for not responding sooner. I will try to call you to discuss. If you are available tomorrow morning, please let me know.

George Robin (robin.george@epa.gov)

Engineer, Underground Injection Control

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From: Ricker, Michelle [mailto:MRicker@scsengineers.com]
Sent: Friday, July 19, 2013 12:30 PM
To: Robin, George
Subject: Evaluating Producing Hydrocarbons for Aquifer Exemptions

Hello, George.

My name is Michelle Ricker, and I work for SCS Tracer Environmental. I am currently in the process of putting together aquifer exemption applications for several oil and gas operators. I was wondering if you could provide us with some clarification on the issue of "producing hydrocarbons" versus "commercially producing hydrocarbons." We are receiving some conflicting messages about what is deemed to be acceptable in terms of proving the presence of hydrocarbons in a formation.

For example, one of my clients wishes to apply for an exemption for water disposal. He has core data which shows the presence of hydrocarbons in a formation but he does not currently have any hydrocarbon production (i.e. active wells) in the area for which they would like to obtain an exemption. However, this area is located within the administrative boundaries of a state-designated field adjacent to two exempted aquifer areas (as defined in the Primacy Agreement). The exempted areas have historic and active oil producing wells. Using the log data and the sidewall cores, my client can show that hydrocarbons are present and that the formation is geologically continuous with parts of the formation in which there is historic and active hydrocarbon production. Do you think this is sufficient evidence to substantiate the presence of

“producing hydrocarbons” and thus give us the basis for an expansion of the exempted aquifer? If so, is there a minimum percent saturation which needs to be shown in order for core data to be used as proof of producing hydrocarbons?

Related to this subject, I have a couple additional questions:

1. What is the difference between “producing” and “commercially producing”?
2. Must core data be used in conjunction with cumulative production data or can it be used on its own with cross sections, structure maps, isopachs, etc?

Thank you in advance for any assistance you can provide in this matter. Having the answers to these questions would help us to better prepare our applications for future projects. Any feedback or suggestions would be greatly appreciated.

I'll follow-up with a phone call later this afternoon.

Michelle R Ricker

Project Manager

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